
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Alan Scott HODES

Examiner: Patrick A. Darno

Application No.: 10/788,532

Group: 2163

Filed: February 27, 2004

Confirmation No.: 6928

Title: Patent Analysis and Formulation Using
Ontologies

**APPEAL BRIEF TRANSMITTAL
(37 CFR 192)**

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This brief is in furtherance of the Notice of Appeal filed in this case on August 20, 2007.

This application is on behalf of a small entity.

Pursuant to 37 CFR 1.17(f), the fee for filing the Appeal Brief is \$255.00 (Small Entity).

Applicant(s) hereby petition for a one month extension(s) of time to under 37 CFR 1.136.

Total Fee Due:

Appeal Brief fee	\$255
Extension Fee (one month)	<u>\$60</u>
Total Fee Due	\$315

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex Parte

ALAN. S. HODES

Application for Patent: 10/788,532

Filed: February 27, 2004

Group Art Unit 2163

Examiner Patrick A. Darno

For:

Patent Analysis and Formulation Using Ontologies

APPEAL BRIEF

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1. REAL PARTY IN INTEREST

[37 CFR 41.37(c)(1)(i)]

The real party in interest is Alan Scott Hodes.

2. RELATED APPEALS AND INTERFERENCES

[37 CFR 41.37(c)(1)(ii)]

There are no related appeals or interferences.

3. STATUS OF CLAIMS

[37 CFR 41.37(c)(1)(iii)]

The following claims have been rejected and appealed: claims 1-25.

The following claims have been cancelled: NONE.

The claims on appeal are reproduced below in the Appendix at Section 9 of this Appeal Brief.

4. STATUS OF AMENDMENTS

[37 CFR 41.37(c)(1)(iv)]

No amendments were filed subsequent to final rejection.

5. SUMMARY OF CLAIMED SUBJECT MATTER

[37 CFR 41.37(c)(1)(v)]

5.1. Independent Claim 1

Independent claim 1 recites a method of analysis regarding at least one patent claim. As shown, for example, in Figs. 3 and 4, a correspondence is determined of at least one patent claim to the concept nodes of an ontology. As also shown in Figs. 3 and 4, a correspondence is determined of at least one instance to the concept nodes of an ontology. See [0038] and [0039]. As also shown in Figs 3 and 4, the determined correspondences are processed, wherein a result of the processing includes a determination of whether the at least one instance reads on the at least one patent claim. See [0038] and [0039].

For example, the result may include a determination that at least one patent claim is infringed by the instance (Fig. 3, [0038]) or that the claim is invalid or unpatentable (Fig. 4, [0039]) based on the instance. See, also, [0040].

5.2. Independent Claim 13

Independent claim 13 is directed to a method of analysis regarding at least one patent claim. As shown, for example, in Figs. 3 and 4, a correspondence is determined of at least one patent claim to the concept nodes of an ontology. As also shown in Figs. 3 and 4, a correspondence is determined of at least one instance to the concept nodes of an ontology. See [0038] and [0039]. As also shown in Figs 3 and 4, the determined correspondences are processed, wherein a result of the processing includes a determination of whether the at least one instance reads on the at least one patent claim. See [0038] and [0039].

The result includes a determination that at least one patent claim is infringed by the instance (Fig. 3, [0038]). See, also, [0040].

5.3. Independent Claim 14

Independent claim 14 is directed to a method of analysis regarding at least one patent claim. As shown, for example, in Figs. 3 and 4, a correspondence is determined of at least one patent claim to the concept nodes of an ontology. As also shown in Figs. 3 and 4, a correspondence is determined of at least one instance to the concept nodes of an ontology. See [0038] and [0039]. As also shown in Figs 3 and 4, the determined correspondences are processed, wherein a result of the processing includes a determination of whether the at least one instance reads on the at least one patent claim. See [0038] and [0039].

The result includes a determination that at least one patent claim is invalid (if the at least one claim is in an issued patent) or unpatentable (if the at least one claim is in a pending patent application) (Fig. 4, [0039]) based on the instance. See, also, [0040].

5.4. Independent Claim 21

Independent claim 21 recites a system as illustrated in Fig. 8 [0067]. An instance record database 806 is embodied in a tangible medium. The instance record database comprises a plurality of instance records (810, 812, 814, 816), and each instance record includes a plurality of portion entries 816, each portion configured to hold an indication of a concept node of an ontology (816, “link” and “concept”).

At least one computing device is configured to determine a correspondence of at least one patent claim to the concept nodes of an ontology. As also shown in Figs. 3 and 4, a correspondence is determined of at least one instance to the concept nodes of an ontology. See [0038] and [0039]. As also shown in Figs 3 and 4, the determined correspondences are processed, wherein a result of the

processing includes a determination of whether the at least one instance reads on the at least one patent claim. See [0038] and [0039].

For example, the result may include a determination that at least one patent claim is infringed by the instance (Fig. 3, [0038]) or that the claim is invalid or unpatentable (Fig. 4, [0039]) based on the instance. See, also, [0040].

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

[37 CFR 41.37(c)(1)(vi)]

Ground I:

Claims 1, 6, 13, 14 and 21 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1 and 2 of co-pending Application No. 11/151,781.

Ground II:

Claims 3-4 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Ground III:

Claims 1-5, 11-14, and 18-25 are rejected under 35 U.S.C. 103 as being unpatentable over U.S. Patent Application Publication Number 2002/0111941 to Claude Roux et al. (“Roux”) further in view of U.S. Patent Application Publication Number 2004/0181427 to Gregory A. Stobbs (“Stobbs”).

Ground IV:

Claims 6-10 are rejected under 35 U.S.C. 103 as being unpatentable over Roux in view of Stobbs and further in view of U.S. Patent Number 6,711,585 to Max Copperman et al. (“Copperman”).

Ground V:

Claims 15-17 are rejected under 35 U.S.C. 103 as being unpatentable over Roux in view of Stobbs and further in view of Non-Patent Literature article titled “Generating Patent Claims from Interactive Input” by Svetlana Sheremetyeva et al. (“Sheremetyeva”).

7. ARGUMENT

[37 CFR 41.37(c)(1)(vii)]

7.1. Ground I (Provisional Double Patenting)

7.1.1. Claims 1, 6, 13, 14 and 21

Application No. 11/151,781 has been allowed to go abandoned. Thus, there is no longer an issue with double patenting relative to the 11/151,781 application.

7.2. Ground II (Non-Statutory Subject Matter)

7.2.1. Claims 3 and 4

In the Office Action mailed April 18, 2007, the Examiner has suggested amending claims 3 and 4 to recite “executing a program stored in a computer readable storage medium ...” to overcome the rejection.

The Examiner is in clear error here since claims 1 and 2, on which claims 3 directly or indirectly depend, recite statutory subject matter. Even the Examiner agrees. If claims 1 and 2 recite a statutory method, how can adding the limitation – in claim 3 – of a step of the method including “a computer executing a program” then make the method non-statutory?

7.3. Ground III (Obviousness over Roux and Stobbs)

7.3.1. Claim 1-5, 11-14 and 18-25

A primary premise of the Examiner’s prior art based rejection over Roux and Stobbs is that Roux discloses the subject matter of steps a), b) and c) of claim 1. This premise is used as a basis for rejecting claim 1, as well as for rejecting the remaining claims.

In contending that Roux discloses the subject matter of steps a), b) and c) of claim 1, the Examiner has contended that “It is important to note that a patent claim is simply text.”¹ See Office Action dated April 18, 2007, page 4. Furthermore, the Examiner has also stated, at pages 17-18 of the Office Action:

It is the Examiner’s position that an operation that can be performed on one type of text document can be performed on any type of text document. It is a

¹ The Examiner has not contended that the Roux disclosure of processing “text” would render *obvious* the recited steps of processing “claims.” Had the Examiner made such a contention, he would have been required to provide *additional* evidence of such obviousness, even under the recent KSR case.

fact that a patent claim is simply text. This leads to the conclusion that any operation that can be performed on a text document can also be performed on the text of patent claim.

More generally, then, the Examiner is contending that disclosure of a genus (text) anticipates (i.e., “is simply”) a species (claims). This contention is clear error and, therefore, all the prior art based rejections must fail, since all the prior art based rejections rely on this contention.

Applicant respectfully refers the Examiner to MPEP 2131.02, which is entitled “Genus-Species Situations” and sets forth a good discussion of the law in this area. The Examiner also seems to import an improper “obvious to try” assertion with regard to the argument that “any operation that can be performed on a text document can also be performed on the text of a patent claim.” (emphasis added)

With regard to the genus/species portion of the Examiner’s argument, MPEP 2131.02 recites, “A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claim genus.” If the Examiner had cited a reference that disclosed the species (claim) and cited this against a genus (i.e., text was recited), Applicant would agree that this may be a proper rejection under MPEP 2131.02, that the reference may be properly applied in this case. (This assumes, for the sake of argument only, that the Examiner would be correct in contending that a “claim” is a species of “text.”)

However, the Examiner has argued completely the opposite, which is improper and has no legal basis whatsoever. The Examiner simply has not made a *prima facie* case that the Roux reference discloses processing a “claim.”

The Examiner contends that it is the Applicant’s burden to rebut the contention “with evidence or support.” See pp. 17-18 of the Office Action mailed April 18, 2007, where the Examiner says that “Applicant did not provide any support for the allegation that the text of patent claims is different from the text of ordinary documents.” It is the Examiner’s initial burden to set forth a proper *prima facie* case, and this he did not do. In any event, a patent claim clearly has special properties that make it different from “ordinary text.” In fact, Applicant has spent a good portion of the patent specification discussing the special properties of patent claims, specifically of element-by-element determinations relative to patentability, invalidity and

infringement determinations. Roux discloses nothing of patent claims at all, let alone “element-by-element” determinations on patent claims.

Applicant recognizes that, in some special cases, a disclosure of a genus may properly be considered to anticipate a claimed species. For example, the case of Ex Parte A (a chemical case) is cited in MPEP 2132.02 for the proposition that (paraphrased), if one is able to “at once envisage” the species from the disclosure of the genus, then the genus may properly be considered to anticipate the claimed species. In the Ex Parte A case, the reference disclosed a “more limited generic class” that “consisted of about 20 compounds” and the compound recited in the claim was one of the 20 compounds. This is not analogous to the current situation, nor has the Examiner made any such assertion.

With regard to Stobbs, the Examiner is in clear error in contending, at page 4 of the Office Action mailed April 18, 2007, that “Stobbs discloses wherein a result of processing the determined correspondence of the portions of the at least one patent claim portions and the determined correspondence of the portions of the at least one instance includes a determination of whether the at least one instance reads on the at least one patent claim.”

Applicant has covered this point in some detail on page 11 of the Response filed February 27, 2004. For example, Applicant argued that the portion of Stobbs cited by the Examiner (paragraphs [0108] and [0109]) relative to claim 13 merely discloses, at best, that module 188 is used to identify “likely candidates for possible infringement of the claims at issue” by using Internet search engine 186 to generate two sets of search results and identify “web pages that are in both sets of search results.”

The search results are (1) results of presenting the claims as a query and (2) results of presenting product descriptions of the products covered by those claims. The “products” whose descriptions are used to determine the second search results are not potentially infringing products or potentially invalidating products. Significantly, the “products” are merely “a client’s product that is covered by the claims at issue.”

Furthermore, it is notable that not only is no ontology involved but, further, Stobbs does not even disclose processing a “determined correspondence” of anything as contended by the Examiner, since Stobbs merely discloses identifying “likely

candidates for possible infringement” and, presumably, would rely on a manual inspection and analysis to determine if there is actual infringement. In fact, even this cannot be presumed, since there is no disclosure whatsoever of what process would be taken to determine if there is actual infringement.

7.4. Ground IV (Obviousness over Roux, Stobbs and Copperman)

7.4.1. Claims 6-10

The Examiner is in clear error in contending, at page 11 of the Office Action mailed April 18, 2007, that “Copperman discloses wherein determining a comparison includes determining whether there is a one to one correspondence between concept nodes in claim records and concept nodes in instance records.”

Applicant has pointed out that “claim records” are mentioned nowhere in Copperman. The Examiner’s response, at page 21 of the Office Action mailed April 18, 2007, completely ignores Applicant’s assertion with regard to “claim records.”

Furthermore, Applicant has further pointed out (see page 12 of the Response filed January 25, 2007) that the disclosure of Copperman does not support the Examiner’s contention. Applicant specifically pointed out that:

What Copperman actually states at column 15, lines 8-11, is:

In one embodiment, classifications used by the text classifiers correspond one-to-one with concept-nodes within topic taxonomies. A separate text classifier is applied for each taxonomy.

.... [C]lassifications corresponding one-to-one to concept nodes has nothing to do with determining a correspondence of concept nodes to concept nodes.

The Examiner stated, in the response on page 21 of the Office Action mailed April 18, 2007

Surely if the invention only permits one-to-one concept node mapping then the invention has some means of determining if there is a one-to-one correspondence of concept nodes to concept nodes. If it had no means of determining if there is a one-to-one mapping, how would it know not to permit a two-to-one mapping? It is clear this determination must be present.

Unfortunately, Applicant may not have been clear enough in the argument. Copperman discloses that classifications correspond one-to-one with concept nodes. Thus, as best understood by Applicant, a text classifier, classifying text, would map text that is characterized by a particular classification to a concept node to which that classification corresponds.

However, the disclosure of mapping text to concept nodes (albeit, based on a classification determined for the text) is simply not the same as determining whether there is a one-to-one correspondence between concept nodes (remember, plural) of a claim record and concept nodes (again, plural) in instance records, which is what would typically be required in making determinations of unpatentability, invalidity and/or infringement. The cited portion of Copperman does not appear to disclose (or even suggest) such a feature.

7.5. Ground V (Obviousness over Roux, Stobbs and Sheremetyeva)

7.5.1. Claims 15 and 17

Claims 15 and 17, dependent on claim 14, are allowable for at least the reasons that claim 14 is allowable.

Furthermore, the Examiner notes at page 13 of the Office Action mailed April 18, 2007: “It is important to note that a description of an embodiment of an invention is simply text.” Like the Examiner’s statement that “a claim is simply text,” this statement regarding an “embodiment of an invention” being simply text is unsupported and improper.

Still further, with respect to Sheremetyeva, the Examiner contends that Sheremetyeva discloses processing the determined correspondence of the embodiment portions and formulating the at least one patent claim based at least in part thereon. The Examiner specifically notes: “Sheremetyeva: Abstract, lines 4-5 and page 2, left column, lines 34-37 and page 2, right column, lines 7-10, 14-17, 23-29 and page 3, Fig. 2, 10-14).”

Applicant’s claim 15 recites

determining a correspondence of the portions of an embodiment to the concept nodes of the ontology; and processing the determined correspondence of the embodiment portions and formulating the at least one patent claim based at least in part thereon.

At best, Sheremetyeva elicits from an inventor a correspondence of claim elements to a conceptual schema. For example, see page 3, “the system guides the user through the paces of describing every essential feature of the invention.” Sheremetyeva’s formulated claim is the goal, and the formulated claim is based on the claim elements provided by the inventor. On the contrary, according to claim 15, the formulated at least one patent claim is one that can then be tested against the prior art (see text of claim 14). Therefore, not only does the combination of Roux, Stobbs and Sheremetyeva fail to yield the subject matter of claim 15 but, also, it would not have been obvious to combine the references as the Examiner contends.

7.5.2. Claim 16

Furthermore, as recited in claim 16, for example, a result of testing the formulated at least one patent claim can be used as input to formulating other patent claims. The Examiner contends at page 14 of the Office Action mailed April 18, 2007, that “If one can generate a first patent claim, one can generate a second patent claim.” The Examiner further states, at page 22 of the Office Action mailed April 18, 2007, There is no evidence to suggest the S reference only formulates one patent claim and never formulates a second patent claim.

While this may be true, whether the formulated patent claim is a “first claim,” a “second claim” or a “ten thousandth claim,” the formulated patent claim is based only on input provided by the user of the elements of the invention.

There is more to claim 16 than this. Claim 16 recites:

the formulated at least one patent claim is a first formulated at least one patent claim; and the method further comprises formulating a second at least one patent claim, based at least in part on the determination of whether the at least one prior art instance renders the first at least one patent claim unpatentable.

The Examiner is not free to ignore recitations in claim 16. In fact, as the Examiner concedes, Sheremetyeva does not even disclose analyzing the patent claim to determine whether it is unpatentable. Given that, it is illogical to content that Sheremetyeva discloses formulating “a second patent claim” based on a determination of whether a first claim is unpatentable.

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8. CONCLUSION

In view of the foregoing, it is respectfully submitted that the Examiner's rejections are erroneous. Accordingly, the rejections should be reversed.

Respectfully submitted,

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9. CLAIMS APPENDIX
[37 CFR 41.37(c)(1)(viii)]

CLAIMS ON APPEAL

1. A method of analysis regarding at least one patent claim, comprising:
 - a) determining a correspondence of the portions of the at least one patent claim to the concept nodes of an ontology;
 - b) determining a correspondence of the portions of at least one instance to the concept nodes of the ontology; and
 - c) processing the determined correspondence of the portions of the at least one patent claim and the determined correspondence of the portions of the at least one instance;
wherein a result of processing the determined correspondence of the portions of the at least one patent claim portions and the determined correspondence of the portions of the at least one instance includes a determination of whether the at least one instance reads on the at least one patent claim.
2. The method of claim 1, wherein:
 - step a) includes completing a claim record for each of the at least one patent claim under study indicating the correspondence determined in step a);
 - step b) includes completing an instance record for each of the at least one instance under study indicating the correspondence determined in step b); and
 - step c) includes processing the completed claim records and the completed instance records.
3. The method of claim 2, wherein:
 - the claim record and the instance record are embodied in a computer-readable medium; and
 - step c) includes a computer executing a program to process the claim record and the instance record.

4. The method of claim 3, wherein:
step c) further includes the computer executing a program to process an index to instance records, by concept node, based on at least one concept node indicated in at least one of the completed claim records.
5. The method of claim 2, wherein:
completing the claim record and completing the instance record includes indicating the concept node to which each portion of the corresponding claim and instance, respectively, corresponds; and processing the completed claim records and the completed instance records includes determining a comparison of the concept nodes indicated by claim records to concept nodes indicated by instance records.
6. The method of claim 5, wherein:
determining a comparison includes determining whether there is a one to one correspondence between concept nodes in claim records and concept nodes in instance records.
7. The method of claim 6, wherein:
the comparison is among the concept nodes indicated by each of a plurality of ones of the instance records, respectively, and the concept nodes indicated by one claim record.
8. The method of claim 7, wherein:
the comparison includes considering the scope of the concepts corresponding to the concept nodes indicated by each instance record, respectively, relative to the scope of the concepts corresponding to the concept nodes indicated by the one claim record.
9. The method of claim 6, wherein:
the comparison is among the concept nodes indicated by each of a plurality of ones of the claim records, respectively, and the concept nodes indicated by one instance record.

10. The method of claim 6, wherein: the comparison is among the concept nodes indicated by each of a plurality of ones of the claim records, respectively, and the concept nodes indicated by one instance record.

11. The method of claim 1, wherein:
step c) includes comparing the determined correspondence of the portions of the at least one patent claim to the determined correspondence of the portions of at least one instance.

12. The method of claim 11, wherein:
step c) includes processing the ontology to determine a relation between the scope of the concepts to which portions of the at least one patent claim correspond and the scope of the concepts to which respective portions of the least one instance correspond.

13. A method of analysis regarding at least one patent claim, comprising:
a) determining a correspondence of the portions of the at least one patent claim to the concept nodes of an ontology;
b) determining a correspondence of the portions of at least one instance to the concept nodes of the ontology; and
c) processing the determined correspondence of the portions of the at least one patent claim and the determined correspondence of the portions of the at least one instance;
wherein a result of processing the determined correspondence of the portions of the at least one patent claim portions and the determined correspondence of the portions of the at least one instance includes a determination of whether the at least one instance infringes the at least one patent claim.

14. A method of analysis regarding at least one patent claim, comprising:
- a) determining a correspondence of the portions of the at least one patent claim to the concept nodes of an ontology;
 - b) determining a correspondence of the portions of at least one instance to the concept nodes of the ontology; and
 - c) processing the determined correspondence of the portions of the at least one patent claim and the determined correspondence of the portions of the at least one instance;
- wherein the at least one instance is prior art to the at least one patent claim; and a result of processing the determined correspondence of the portions of the at least one patent claim and the determined correspondence of the portions of the at least one instance includes a determination of whether the at least one instance renders the at least one patent claim invalid, if the at least one patent claim is in an issued patent, or unpatentable, if the at least one patent claim is not in an issued patent.
15. The method of claim 14, further comprising:
- determining a correspondence of the portions of an embodiment to the concept nodes of the ontology; and processing the determined correspondence of the embodiment portions and formulating the at least one patent claim based at least in part thereon.
16. The method of claim 15, wherein:
- the formulated at least one patent claim is a first formulated at least one patent claim; and the method further comprises formulating a second at least one patent claim, based at least in part on the determination of whether the at least one prior art instance renders the first at least one patent claim unpatentable.
17. The method of claim 14, further comprising:
- determining a correspondence of the portions of an embodiment to the concepts nodes of the ontology; and processing the determined correspondence of the embodiment portions and formulating at least one patent claim based at least thereon and on the determined correspondence of the at least one prior art instance.

18. The method of claim 1, wherein:
the step of determining a correspondence of the portions of the at least one patent claim to the concept nodes of an ontology includes, for each of at least one of the portions, adding to the ontology a concept node to which that portion corresponds.
19. The method of claim 1, wherein:
the step of determining a correspondence of the portions of at least one instance to the concept nodes of the ontology includes, for each of at least one of the portions, adding to the ontology a concept node to which that portion corresponds.
20. The method of claim 1, wherein:
the step of determining a correspondence of the portions of the at least one patent claim to the concept nodes of an ontology includes, for each of at least one of the portions, adding to the ontology a concept node to which that portion corresponds;
and the step of determining a correspondence of the portions of at least one instance to the concept nodes of the ontology includes, for each of at least one of the portions, adding to the ontology a concept node to which that portion corresponds.

21. A system usable for patent analysis, comprising:
an instance record database embodied in a tangible medium, the instance record database comprising a plurality of instance records, wherein each instance record is associated with a separate one of a plurality of instances, and each instance record includes a plurality of portion entries, each portion entry configured to hold an indication of a concept node in an ontology; and
at least one computing device configured to
determine a correspondence of portions of the at least one patent claim to the concept nodes of the ontology; and
process the determined correspondence of the portions of the at least one patent claim and the determined correspondence of the portions of the at least one instance;
wherein a result of processing the determined correspondence of the portions of the at least one patent claim portions and the determined correspondence of the portions of the at least one instance is to include a determination of whether the at least one instance reads on the at least one patent claim.
22. The system of claim 21, further comprising:
ontology storage holding the ontology.
23. The system of claim 21, further comprising:
document storage, holding at least one document, wherein the at least one document embodies the plurality of instances; wherein each instance record includes at least one link record configured to hold a link to the separate one of the plurality of instances embodied in the at least one document.
24. The system of claim 23, wherein:
the at least one link included which each instance record is configured to hold includes a plurality of links, wherein each link is a link to a separate portion of the instance with which the instance record is associated.

25. The system of claim 23, further comprising:
an instance record index comprising a plurality of entries, wherein, each entry of the instance record index corresponds to a separate concept node in the ontology, and is configured to hold an indication of the instance records holding an indication of the concept node to which that entry of the instance record corresponds.

10. EVIDENCE APPENDIX

[37 CFR 41.37(c)(1)(ix)]

No evidence has been submitted pursuant to §§ 1.130, 1.131, or 1.132 of 37 CFR, nor has any other evidence been entered by the examiner.

11. RELATED PROCEEDINGS APPENDIX

[37 CFR 41.37(c)(1)(x)]

There have been no decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 CFR 41.37(c)(1).